National Science Foundation

Directorate for Engineering
Division of Industrial Innovation and Partnerships

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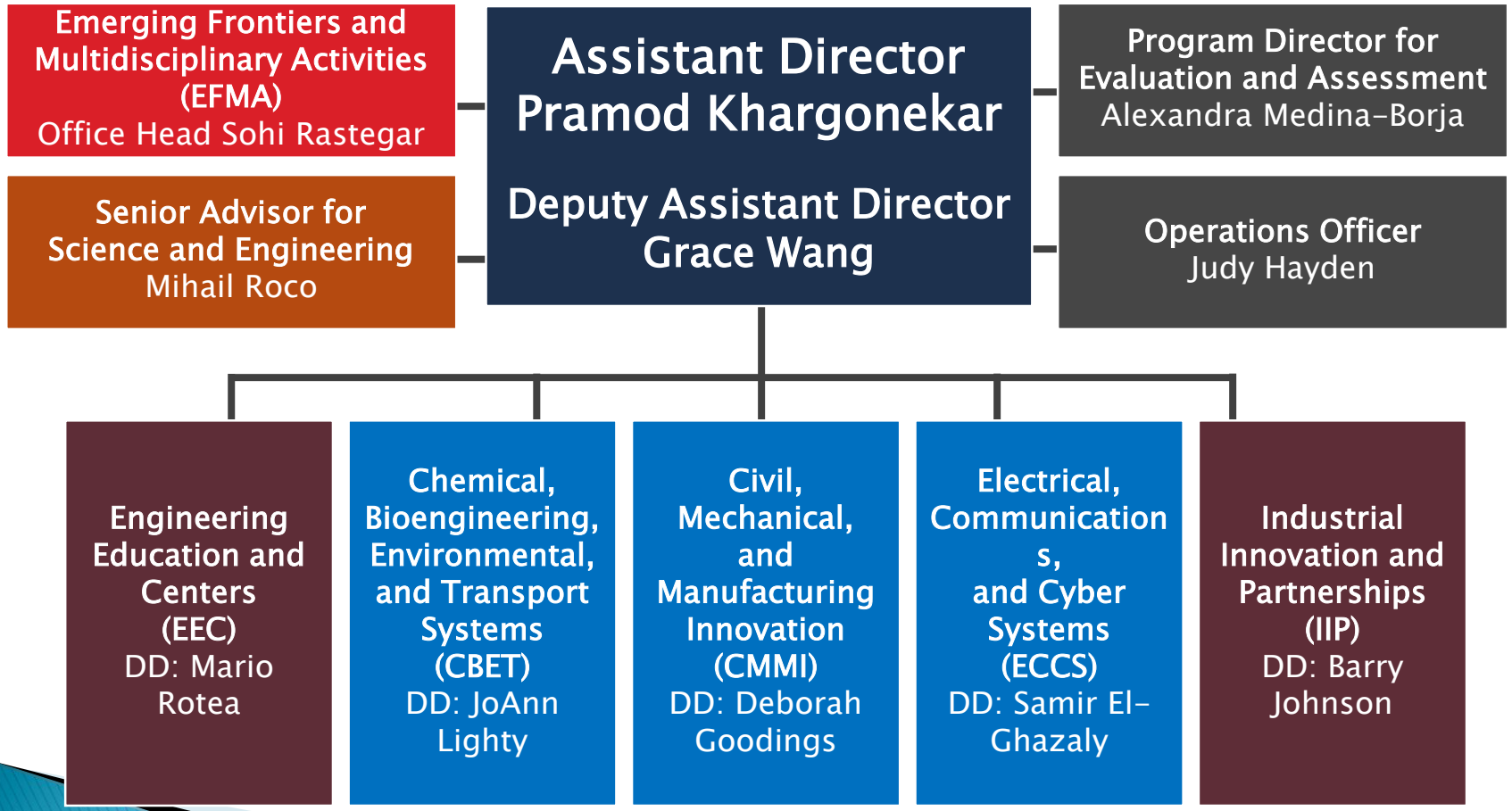
Directorate for Engineering



NSF Mission and Vision

Mission

- "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes."

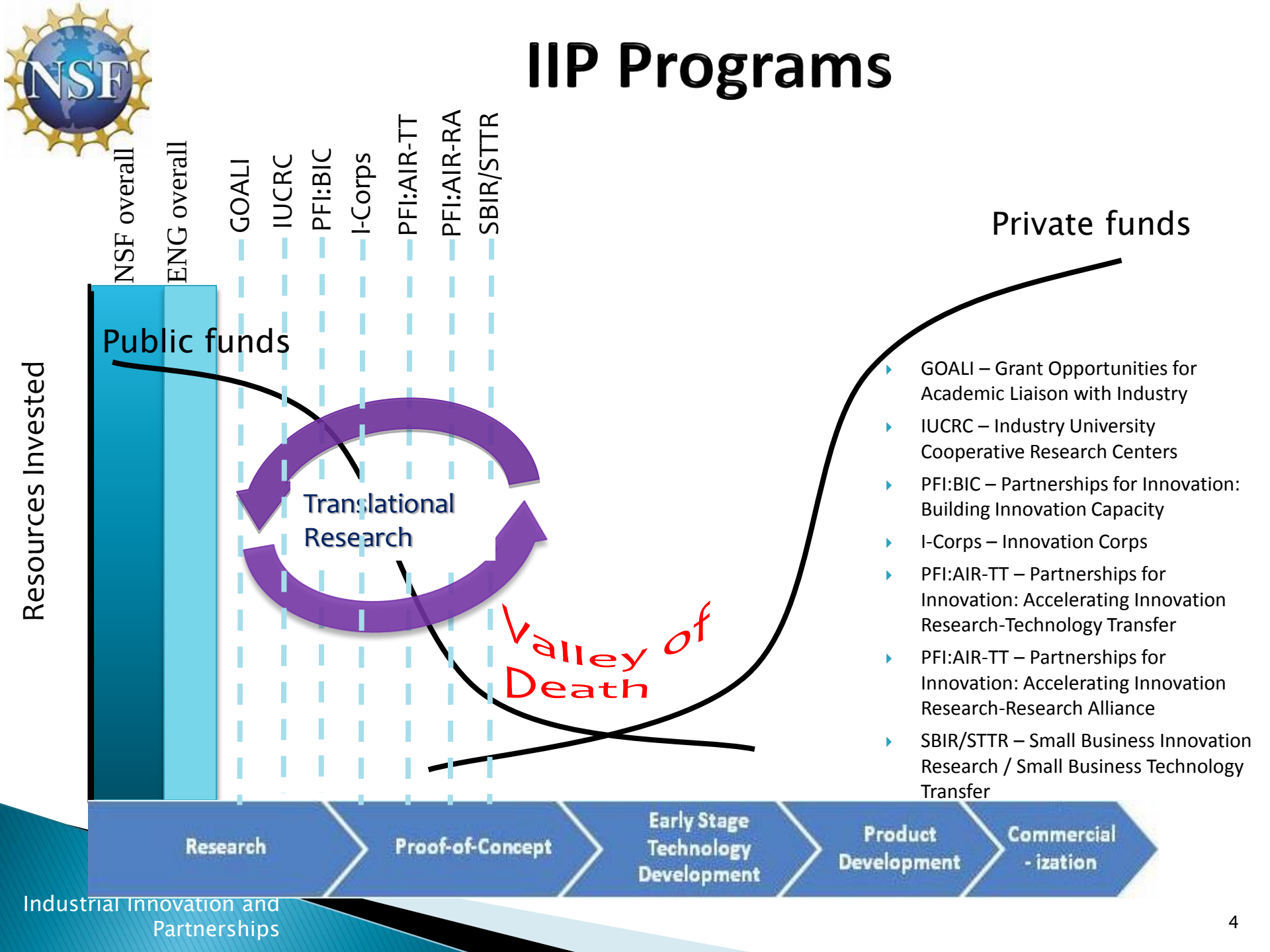
Vision

- "A Nation that creates and exploits new concepts in science and engineering and provides global leadership in research and education."

NSF Strategic Goals

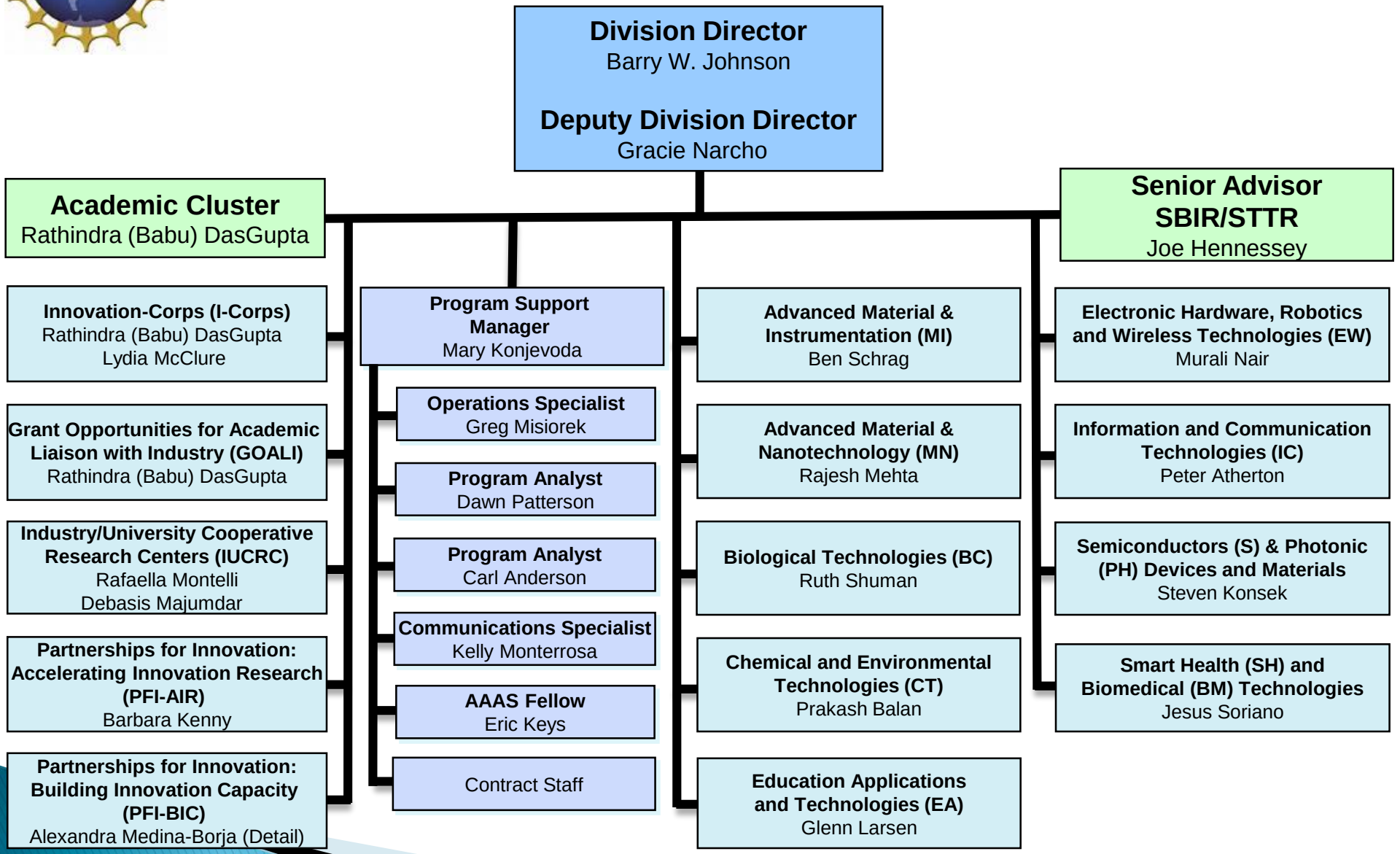
- Strategic Goal 1: Transform the frontiers of science and engineering.
- Strategic Goal 2: Stimulate innovation and address societal needs through research and education.
- Strategic Goal 3: Excel as a federal science agency.

IIP Programs



- GOALI – Grant Opportunities for Academic Liaison with Industry
- IUCRC – Industry University Cooperative Research Centers
- PFI:BIC – Partnerships for Innovation: Building Innovation Capacity
- I-Corps – Innovation Corps
- PFI:AIR-TT – Partnerships for Innovation: Accelerating Innovation Research-Technology Transfer
- PFI:AIR-TT – Partnerships for Innovation: Accelerating Innovation Research-Research Alliance
- SBIR/STTR – Small Business Innovation Research / Small Business Technology Transfer

Industrial Innovation and Partnerships



IUCRC Fast Facts – FY15 Snapshot

- $20.6M in Program Funding (ENG, CISE)
- 75 Active Centers (52 ENG Funded Centers 23 CISE Funded Centers)
- 110 U.S. institutions involved with 225 sites
- 6 official international sites
- Approximately 1200 industry members involved (~19/center)
  60% Large Business, 20% SB, 10% Federal Members, ~10% (State + Others)
- Approximately 1100 senior research investigators involved (~17/center)
- More than 2000 students involved – 30% of the graduates hired by the industry members
- 7 startups spun out (FY14)
- 6:1 leveraging of NSF funds
- 47:1 leveraging of member funds

IUCRC Focus Areas

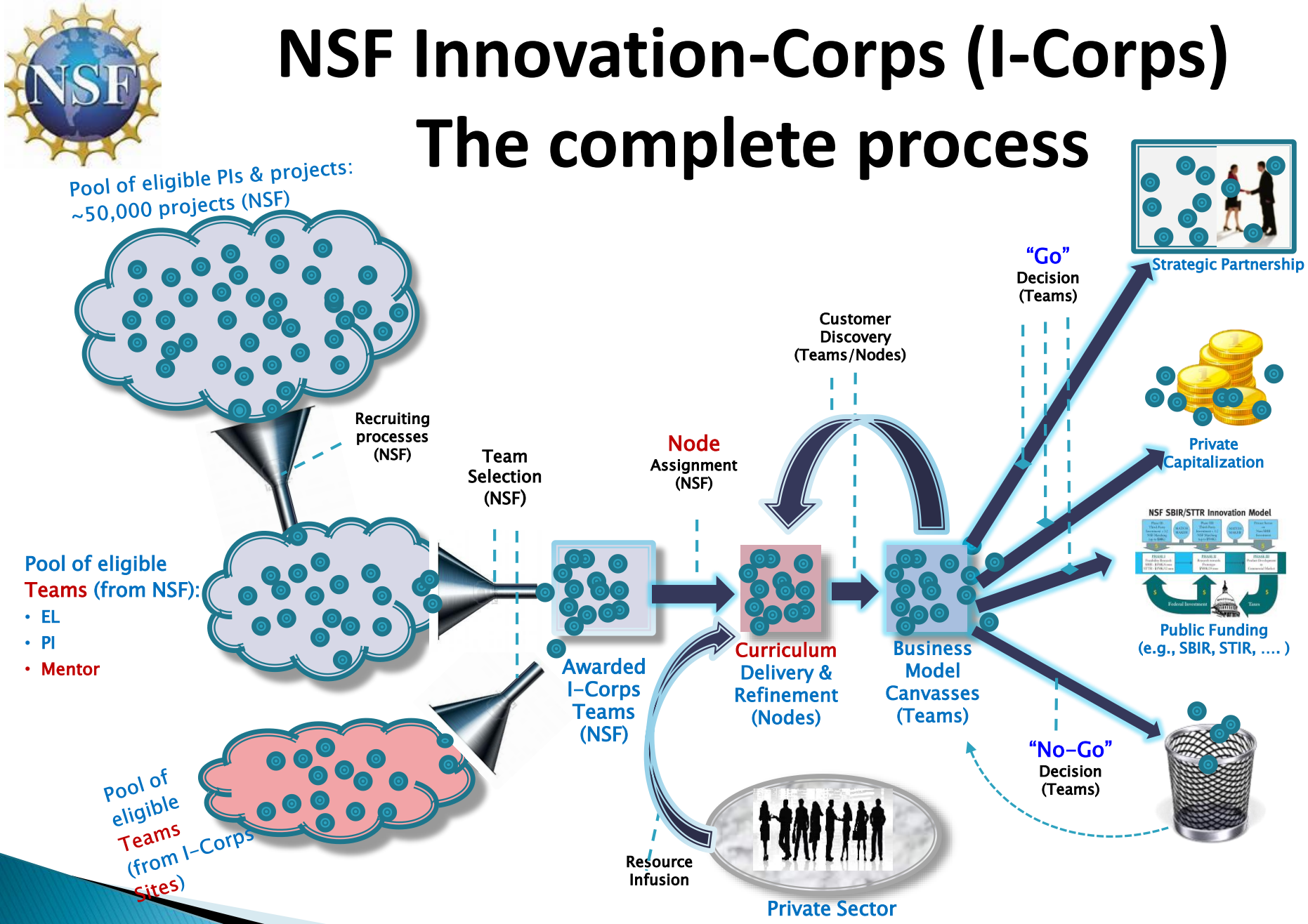
- Advanced Electronics and Photonics
- Advanced Manufacturing
- Advanced Materials
- Biotechnology
- Civil Infrastructure Systems
- Energy and Environment
- Health and Safety
- Information Communication & Computing
- System Design and Simulation

Center Directory: http://www.iucrc.org/

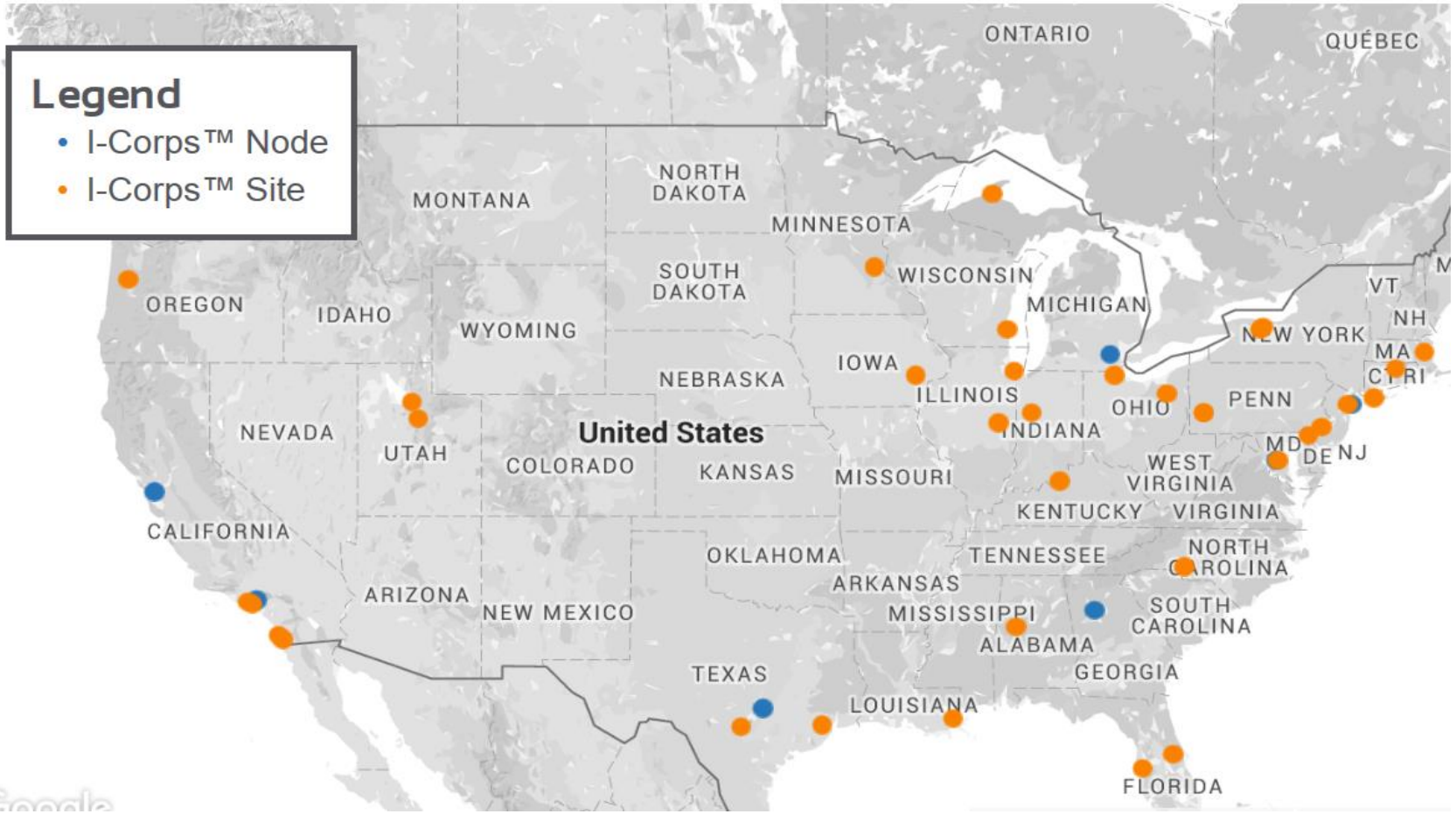
Innovation Corps (I-Corps)

- Designed to foster entrepreneurship that will lead to the commercialization of NSF-funded research
  - Uses customer discovery and business model development to validate commercialization opportunities
  - Successful I-Corps projects will be prepared for business formation
- Distinct components of I-Corps program
  - Teams – Composed of Principal Investigator (PI), Entrepreneurial Lead (EL), and Mentor (M)
  - Nodes – Hubs for education, infrastructure, and research that engage academic scientists and engineers in innovation
  - Sites – Academic institutions that catalyze the engagement of local teams in technology transition and strengthen local innovation

NSF Innovation-Corps (I-Corps)
The complete process

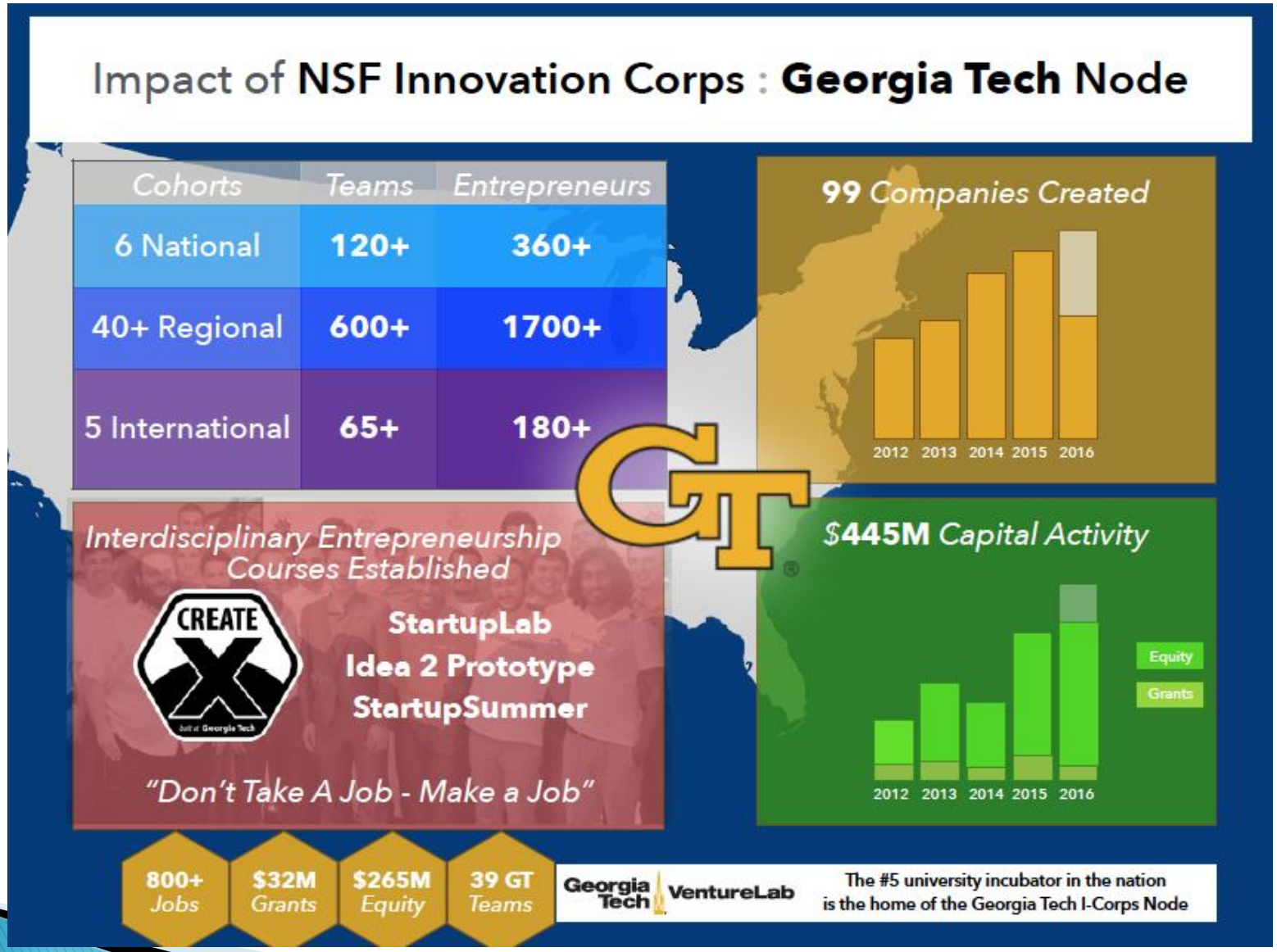


I-Corps Nodes and Sites



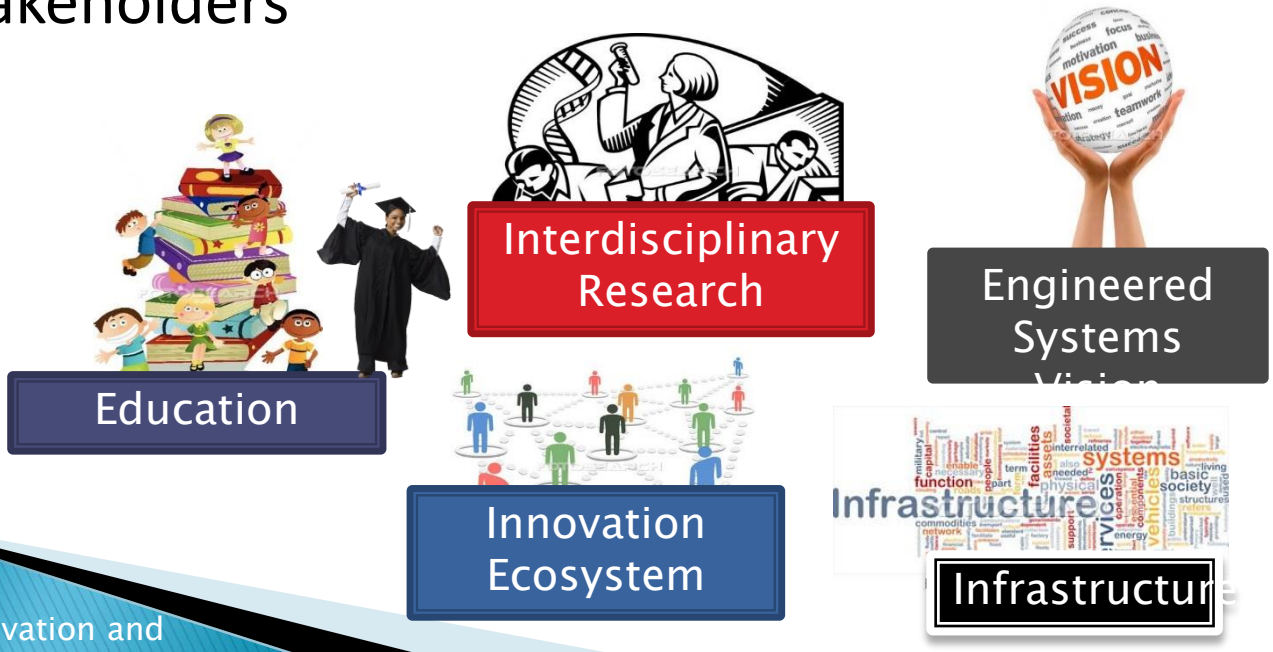
7 Nodes
51 Sites
645 Teams trained to date
220 startups created

Example of Impact with Georgia Tech

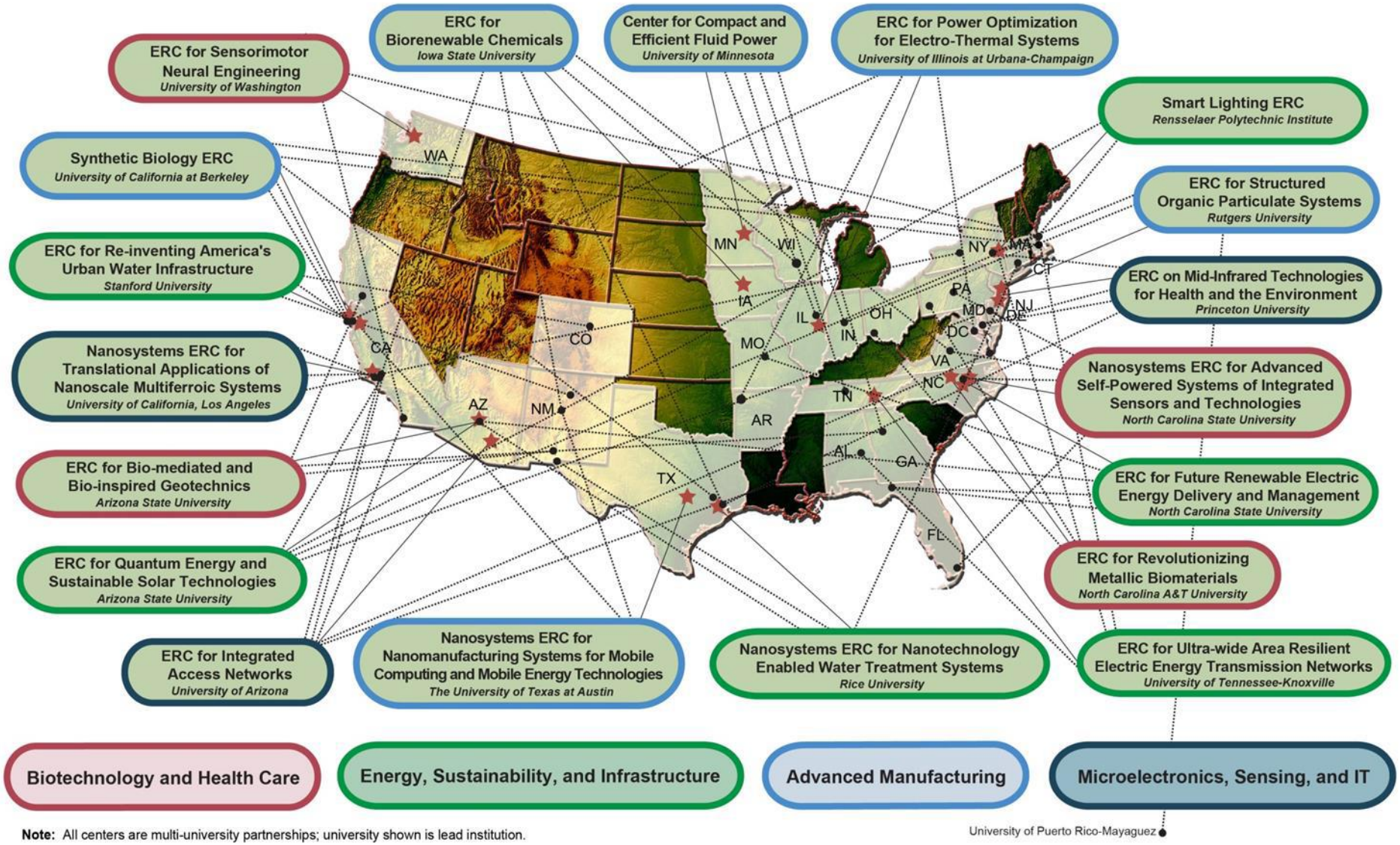


ngineering Research Centers

- ERC's are a flagship investment of NSF to discover and launch ubiquitous future technologies
- ERC's create systems-level technologies that address important challenges and help ensure U.S. remains globally competitive
- ERC's are large organizations with many participants and stakeholders



NSF's FY 2015 Engineering Research Centers
(Lead institutions and core partners)



Note: All centers are multi-university partnerships; university shown is lead institution.

Questions and Contact

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